

AMENDMENTS TO THE SPECIFICATION

Replace paragraph 0003 with:

A cytokine most closely related to IL-2 and IL-15 has been identified and is designated IL-21, and its class I receptor is designated IL-21R. Parrish-Novak et al. suggest that IL-21 plays a role in the proliferation and maturation of natural killer cells from bone marrow, in the proliferation of mature B cells co-stimulated with anti-CD40, and in the proliferation of T cells co-stimulated with anti-CD3 (Parrish-Novak et al., *Nature* 408: 57-63, 2000). Sequencing of the full-length clone, IL-21R, demonstrated that this cDNA contained an open reading frame encoding a 538 amino acid protein having structural motifs common to class I cytokine receptors (Cosman, *supra*; Bazan, *Proc. Natl. Acad. Sci., USA* 87: 6934-6938, 1990). Extracellular motifs include a single cytokine recognition module, two pairs of conserved cysteine residues, and a 'WSXWS' (SEQ ID NO: 5) motif. The intracellular domain contains strong intracellular signaling motifs, including classical box 1 and box 2 motifs (Murkami et al. *Proc. Natl. Acad. Sci., USA* 88: 11349-11353, 1991; Drachman and Kaushansky, *Proc. Natl. Acad. Sci., USA* 94: 2350-2355, 1997; Gurney, et al. *Proc. Natl. Acad. Sci., USA* 92: 5292-5296, 1995), which indicate that the receptor can be a signaling subunit. IL-21R (GenBank® Accession numbers AF254067 (human IL-21R) and AF254068 (mouse IL-21R)) was shown to have the highest amino acid sequence similarity to IL-2R and IL-4R α . Subsequently, Parrish-Novak et al. cloned mouse IL-21R from a mouse splenocyte library, and found that it shares overall structural and functional motifs with human IL-21R (Parrish-Novak et al., *supra*). Further, Parrish-Novak et al. describe the potent effects of IL-21 on all classes of lymphocytes: B, T, and natural killer cells (Parrish-Novak et al., *supra*). Additionally, Ozaki et al. found IL-21R abundantly expressed in lymphoid tissues, where expression occurs via the T cell antigen receptor, suggesting that the immune system can play a role (*Proc. Natl. Acad. Sci., USA* 97:11439-11444, 2000).

Replace paragraph 0021 with:

IL-21 is a cytokine produced by CD4⁺ T cells that is structurally related to IL-2, IL-4, and IL-15 (Parrish-Novak et al., *Nature* 408, 57-63 (2000)) and is known to have potent effects on all classes of lymphocytes, including B, T and NK cells. It acts synergistically on T cells with a proliferative signal provided by anti-CD3 antibodies, and promotes expansion of mature B cells in response to stimulation through CD40. In addition, IL-21, in synergy with Flt3 ligand and IL-15, promotes expansion and differentiation of NK cells from bone

marrow progenitors *in vitro*, and enhances lytic effector function against target cells in lysis assays. (Parrish-Novak et al. (2000), *supra*). The amino acid and nucleotide sequences of human IL-21 are known in the art and are publicly available at the National Center for Biotechnology Information (NCBI) website as GenBank® Accession Nos. AAG29348 SEQ ID NO: 6) and AF254069 (SEQ ID NO: 7), respectively. Furthermore, the amino acid and nucleotide sequences of mouse IL-21 are known in the art and are publicly available as GenBank® Accession Nos. AAG29349 (SEQ ID NO: 8) and AF254070 (SEQ ID NO: 9), respectively.